



Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification

Product Name: Nutrifos® B-Series
Reference Number: AST10026
Date: May 2, 2006

Use of the substance or preparation

Food Ingredient

Company/Undertaking Identification

ICL PERFORMANCE PRODUCTS LP
622 Emerson Road - Suite 500
St. Louis, Missouri 63141

Emergency telephone

In USA call CHEMTREC: 1 800 424 9300
In Canada call CANUTEC: 1 613 996 6666

General Information: 1 800 244 6169 (Worldwide)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Composition

<u>Substance</u>	<u>CAS No.</u>	<u>EINECS No.</u>	<u>Risk Phrase</u>
Sodium Tripolyphosphate	7758-29-4	231-838-7	None
Sodium Hexametaphosphate	68915-31-1	272-808-3	None
Tetrasodium Pyrophosphate	7722-88-5	231-767-1	None

3. HAZARDS IDENTIFICATION

Classification of the substance/preparation

EC Classification: None
Safety Phrase: None

Human Health Effects

CAUTION!
MAY CAUSE RESPIRATORY TRACT IRRITATION

Likely Routes of Exposure: Skin contact and inhalation

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EYE CONTACT: No more than slightly irritating based on toxicity studies of the components. The dry powder may cause foreign body irritation in some individuals.

SKIN CONTACT: No more than slightly toxic or slightly irritating based on toxicity studies of the components. Prolonged contact with the dry powder may cause drying or chapping of the skin.

INHALATION: This product may cause coughing, chest tightness, runny nose, chest pain, and burning throat based on the physical properties of TSPP.

INGESTION: No more than slightly toxic if swallowed based on studies of the components. No significant adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallowed. Swallowing large amounts may cause abdominal discomfort and diarrhea.

Refer to Section 11 for toxicological information.

Environmental Effects

This material is not expected to product any significant adverse environmental effects when recommended use instructions are followed.

4. FIRST AID MEASURES

General

Treatment is symptomatic and supportive.

Eye contact

Immediate first aid is not likely to be required. However, this material can be removed with water. Remove material from eyes, skin and clothing. Wash heavily contaminated clothing before reuse.

Skin contact

Immediate first aid is not likely to be required. However, this material can be removed with water. Remove material from eyes, skin and clothing. Wash heavily contaminated clothing before reuse.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion

Immediate first aid is not likely to be required. A physician or Poison Control Center can be contacted for advice.

5. FIRE FIGHTING MEASURES

Extinguishing media

Non-combustible. No special requirement.
To extinguish fire use water spray, dry chemical, carbon dioxide, or appropriate foam

Unsuitable extinguishable media

Non-combustible. No special requirement.

Exposure hazards

No special considerations.

Protective equipment

As a general precaution, firefighters and others exposed, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid unnecessary exposure and remove all material from eyes, skin and clothing.

Environmental precautions

Small quantities: See below

Large quantities: See below

Method for cleaning up

In case of spill, sweep, scoop or vacuum and remove and place in containers. If possible, complete cleanup on a dry basis. After all practical dry clean up has been done, flush residual spill area with water.

7. HANDLING AND STORAGE

Handling:

Avoid breathing dust.

Keep container closed.

Use only with adequate ventilation.

Engineering measures

Provide natural or mechanical ventilation to minimize exposure. The use of local mechanical exhaust ventilation is preferred at sources of air contamination such as open process equipment. Consult National Fire Protection Association (NFPA) Standard 91 for design of exhaust systems.

Storage

Store in cool, dry place to maintain product performance. Emptied container retains product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed. The reuse of this material's container for non-industrial purposes is prohibited and any reuse must be in consideration of the date provided in the MSDS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure limit

ACGIH TLV 10 mg/m³ (inhalable) 8-hr TWA, 3 mg/m³ (respirable) 8-hr TWA

OSHA PEL 15 mg/m³ (total dust) 8-hr TWA, 5 mg/m³ (respirable) 8-hr TWA

OSHA and ACGIH have not established specific exposure limits for this material. However, OSHA and ACGIH have established limits for particulates not otherwise regulated (PNOR) and particulates not otherwise classified (PNOC) which are the least stringent exposure limits applicable to dusts.

Component:

Tetrasodium pyrophosphate which has the following airborne exposure guidelines:

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State	Standard	Limit
Australia	Occupation Exposure Limit	5 mg/m ³ 8-hr. TWA
Belgium	Occupation Exposure Limit	5 mg/m ³ 8-hr. TWA
Denmark	Occupation Exposure Limit	5 mg/m ³ 8-hr. TWA
Finland	Occupation Exposure Limit	5 mg/m ³ 8-hr. TWA, 3 mg/m ³
France	Occupation Exposure Limit	VME 5 mg/m ³
Norway	Occupation Exposure Limit	5 mg/m ³ 8-hr. TWA
Switzerland	Occupation Exposure Limit	MAK - week 5 mg/m ³
United Kingdom	Occupation Exposure Limit	5 mg/m ³ 8-hr TWA
United States	Occupation Exposure Limit	5 mg/m ³ 8-hr. TWA

Components referred to herein may be regulated by specific Canadian provincial legislation. Please refer to exposure limits legislated for the province in which the substance will be used.

Respiratory protection

Avoid breathing dust. Use NIOSH/MSHA approved respiratory protection equipment when airborne exposure limits are exceeded (see below). Consult the respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 C.F.R. 1910.134 and or European Standard EN149.

Hand/Skin protection

Although this product does not present a significant skin concern, minimize skin contamination by following good industrial practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Eye protection

This product does not cause significant eye irritation or eye toxicity requiring special protection. Use good industrial practice to avoid eye contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Form: Powder, granules or glass plates
Color: White
Odor: Odorless

Important health, safety and environmental information

pH: Neutral to slightly basic (as a 1% solution @ 25 degrees C)
Melting point: STPP begins to melt incongruently @ 552 degrees C, completely melted @ 622 degrees C; SHMP melts at 628 degrees C
Solubility in Water: Complete

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

Product is stable under normal conditions of storage and handling.

Conditions to avoid

None known.

Materials to avoid

None known.

Hazardous decomposition

None known.

11. TOXICOLOGICAL INFORMATION

Laboratory data

The dry powder may cause foreign body irritation in some individuals. Excessive inhalation of dust may be annoying and can mechanically impede respiration. The high alkalinity of tetrasodium pyrophosphate (TSPP) may cause upper respiratory tract irritation. Prolonged contact with the dry powder may cause drying or chapping of the skin.

This product has not been tested as a whole. Data from laboratory studies conducted by ICL Performance Products LP and from the scientific literature with the components are summarized below.

Sodium Tripolyphosphate

Single-dose acute toxicity studies indicate that this material is practically nontoxic orally (rat) and practically nontoxic after skin application (rabbit). It is slightly irritating to rabbit eyes and nonirritating to rabbit skin.

Rats fed this material in their diet for two years exhibited decreased growth, increased kidney/body weight ratios, and kidney changes. No birth defects were noted in rabbits given this material orally during pregnancy. No effects were seen on the ability of male and female rats to reproduce when fed this material for 3 successive generations. This material has generally produced no genetic changes in a variety of standard tests using animals and animal or bacterial cells. Genetic changes were reported in a standard test using yeast cells.

Sodium Trimetaphosphate

Single-dose acute toxicity studies indicate that this material is practically nontoxic orally (rat). It is slightly irritating to rabbit eyes and nonirritating to rabbit skin.

Rats fed this material in their diet for one month showed decreased growth, increased kidney-to-body weights and slight kidney changes. Rats fed this material for two years also showed decreased weight gain, as well as blood changes and increased mortality. No increase in tumors was reported. No adverse effects in reproductive capacity were reported in a multigeneration study using rats fed this material.

The following components have been defined as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Sodium Hexametaphosphate

Single-dose acute toxicity studies indicate that this material is practically nontoxic orally (rat) and practically nontoxic after skin application (rabbit). It is slightly irritating to rabbit eyes and nonirritating to rabbit skin.

Rats fed this material in their diet for one month showed decreased growth, increased kidney, lung and spleen weight, and kidney damage. Rats fed this material for two years also showed decreased weight gain, increased kidney weight, and kidney changes. No increase in tumors was reported. No adverse effects in reproductive capacity were reported in a multigeneration study using rats fed this material.

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Tetrasodium pyrophosphate

Oral - rat LD50: 3,770 mg/kg; slightly toxic
Dermal - rabbit LD50: > 7,940 mg/kg; practically nontoxic
Eye Irritation - rabbit: 43.0/110.0; extremely irritating
Skin Irritation - rabbit (24-hr exp.): 0.0/8.0; non-irritating

Rats fed tetrasodium pyrophosphate in their diet for four months showed a reduced weight gain, urinary changes, increased organ-to-body weight ratios, and slight kidney damage. No birth defects were reports in rabbits, hamsters, mice or rats given this material orally during pregnancy. Tetrasodium pyrophosphate produced no genetic changes in standard tests using bacterial and yeast cells.

12. ECOLOGICAL INFORMATION

Environmental toxicity

ICL Performance Products LP has not conducted environmental toxicity studies with this product, and no data was retrieved in a search of the available scientific literature. Available data for components suggest that this material would be practically nontoxic to invertebrates and fish (LC50 or EC50 > 100 mg/L).

Environmental fate

ICL Performance Products LP has not conducted biodegradation studies with this product since when dissolved / hydrolyzed in water it yields completely mineralized materials.

13. DISPOSAL CONSIDERATIONS

European waste catalog number

Unknown

Disposal Considerations

This material when discarded is not a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dry material may be landfilled or recycled in accordance with local, state and federal regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Road/Rail, Sea and Air

IMDG/UN	Not regulated.
ICAO/IATA	Not regulated.
RID/ADR	Not regulated.
Canadian TDG	Not regulated.
US DOT	Not regulated.

15. REGULATORY INFORMATION

EC Label

Hazard symbol: none

Chemical Inventory

USA TSCA: Listed

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Canada DSL: Listed

EC: Listed

Other information

WHMIS Classification: D2(B) - Materials Causing Other toxic Effects

SARA Hazard Notification

Hazard Categories Under Title III Rules (40 CFR 370): Immediate

Section 302 Extremely Hazardous Substances: None

Section 313 Toxic Chemical(s): None

CERCLA Reportable Quantity: Not listed

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contain all the information required by the Canadian Controlled Products Regulation.

16. OTHER INFORMATION

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>Additional Information</u>
Suggested NFPA Rating	1	0	0	
Suggested HMIS Rating	1	0	0	F F = safety glasses, synthetic apron, gloves, dust respirator

Reason for revision: Revised sections 11. Supersedes MSDS dated: April 20, 2006

Drafted in accordance with ECC Dir 2001/58/EC

Nutrifos® is a registered trademark of ICL Performance Products LP

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